

this instance. At the same time, he had himself met with at least one instance of a remarkably sudden change of the colour in the feathers of a fowl of the Hamburg breed, a record of which he had brought before the Society some years ago.

The following gentlemen were elected ordinary members of the Society:—Willoughby Montgomery Moore, Esq., Howth; Major L. E. Knox, 53, Fitzwilliam-square; and Dr. Francis R. Cruise, 37, Westland-row.

The meeting then adjourned to the first Thursday in January.

THURSDAY, JANUARY 2, 1868.

ROBERT CALLWELL, M. R. I. A., V.P., in the Chair.

Read the Minutes of preceding Meeting, which were confirmed.

Read the following paper:—

ON SOME PALLIOBRANCHIATE SHELLS FROM THE IRISH ATLANTIC.

By Professor W. KING.

THE shells described in the present communication were obtained through the soundings and dredgings conducted by Staff-Commander Richard Hoskyn, R. N., in 1862, at the time commanding H. M. S. "Porcupine," for purposes in connexion with the then proposed telegraphic communication between Ireland and Newfoundland.

The general result of these soundings, in a natural history point of view, has already been published in various papers;* I now propose to give some information on four species of shells—all of the kind yielded by the expedition—belonging to the class *Palliobranchiata*.

Order—ANCYLOBRACHIA (J. E. Gray).

1. *Terebratulina caput-serpentis* (Linnæus).

A fragment of a shell, which I have some doubts in referring to this species, came up, along with rounded pieces of a *Cellepore*, from a depth of 495 fathoms, in N. lat. $51^{\circ} 3'$, W. long. $14^{\circ} 56\frac{1}{2}'$.

The species is somewhat common on much shallower bottoms on the west coast of Ireland.

* See "Brit. Ass. Report," 1862, Notices, &c., p. 108, and the author's "Preliminary Notice of the Organic and Inorganic Objects obtained from the Soundings of H. M. S. 'Porcupine,' &c., in "Nautical Magazine," November, and December, 1862; "Supplementary Note" to "Observations on the Proposed Telegraphic Communication between Ireland and Newfoundland," in "Nautical Magazine," December, 1862; and his paper "On certain Physical and Natural History Phenomena of the Atlantic," in "Fraser's Magazine," October, 1863. The Lords of the Admiralty at the time gave instructions for all the specimens procured during the expedition to be placed, as far as practicable, in his hands for publication.

2. *Macandrevia cranium*—*Terebratula*, *id.*,* (Müller).

A specimen—the umbone of the large valve—of this rare species was brought up from 495 fathoms, in N. lat. $51^{\circ} 3'$, W. long. $14^{\circ} 56\frac{1}{2}'$. It possesses the dental plates, emarginate foramen, and tubular structure, diagnostic of the species.

The specimen is not in a fresh condition, which suggests the possibility of its being the remains of an individual that lived in a late tertiary period. There is no reason, however, why it may not have belonged to a recent individual, as living specimens of the species have been obtained from deep water off Unst, one of the Shetland Isles.

Order—HELICTOBRACHIA (J. E. Gray).

3. *Crania anomala* (Müller).

A few young specimens of this shell were found adhering to small pebbles brought up by the dredge from the "Porcupine Bank" (so called by Hoskyn), at the depth of 120 fathoms, and about 120 miles west of Slyne Head. A fragment was also got on the Rockall Bank, about 300 miles west of Scotland. The species is common, in deep water, on the Atlantic coasts of Ireland and Scotland.

It is noteworthy that a large number of small pebbles, from half an inch to three inches in size, came up in the dredge while exploring the "Porcupine Bank." Usually *Serpulas*, *Chitons* and *Cellepores* were attached to all the surfaces of the pebbles, except the one on which it may be conceived they rested: a fact proving how little the pebbles can have been rolled about; and showing, as I pointed out in 1862, that a telegraph cable, laid at the comparatively shallow depth of 120 fathoms, cannot be much affected by the heavy seas of the Atlantic. The success of the cable since laid down has confirmed my opinion.

4. *Discina Atlantica* (nobis).

This helictobrach, which does not appear to have been described, besides being one of the novelties of the "Porcupine" expedition, is one of the most interesting additions to the conchology of our seas. A single specimen of the upper valve, apparently belonging to a young individual, occurred to me on breaking open a piece of drab-coloured foraminiferal mud,† which came up in the sounding machine from the depth of 1240 fathoms, in N. lat. $52^{\circ} 8'$, W. long. $15^{\circ} 30'$, or nearly due west of Dingle Bay. The place is evidently on the outer slope of the great submarine ridge, made known through the soundings of Commanders Dayman and Hoskyn, which runs in a meridional direction off the coasts of Cork and

* The genus *Macandrevia* was diagnosed by myself in the "Natural History Review," vol. vi, p. 520. Dublin, 1859.

† The mud contained pieces of rock, the largest half an inch long, apparently a ferruginous sandstone.

Kerry, about 140 miles from land, and rises in its shallowest part to within 190 fathoms of the surface of the Atlantic.* Possibly the specimen did not actually live where it was taken, since it may have settled down from a much higher part of the slope. Considering, however, that Professor Thorell has got living objects, among which is a shell, from a deeper sea-bed (1400 fathoms) in the Arctic Ocean, there is considerable probability that the species is from a truly abyssal habitat.

Doubtless it will be suspected that the specimen is a waif, brought from some distant locality, and accidentally deposited on the bottom that yielded it—a suspicion just as likely to be correct as the notion that there are no other species of shells living in the deep portions of the Atlantic than those known to inhabit the shallower sea-beds around our coasts.

There is another view which may be held with more show of reason—the specimen may belong to a species not existing at present in the Atlantic, but which may have lived in it during, perhaps, the latest of the Tertiary periods, like the “sub-fossils,” *Rhynchonella psittacea*, *Astarte crebricostata*, *A. borealis*, *Mya Udderallensis*, &c., got by myself some years ago from the German Ocean, off the coast of Northumberland;† but it is so fresh in every respect, that I am strongly disinclined to accept such a view.

Unfortunately, the specimen, which I have endeavoured to represent in Figs. 1 and 2, is slightly broken at the anterior margin, but sufficient remains to enable me to give a description of it—ample enough, perhaps, to serve in the absence of a specific diagnosis.

Fig. 3.

Fig. 1.

Fig. 2.

I



Upper Valve.—Corneous, brown, thin; rather prominently conical; marginal outline approximately circular; sides scarcely convex; $2\frac{1}{2}$ sixteenths in diameter, and 1 sixteenth in height;‡ apex subcentral, and on the posterior half; outersurface, as seen with a good pocket lens, crowded with fine, regular, sub-parallel, concentric raised lines; inner surface showing, under a high magnifying power, a delicate, scaly, or imbricated appearance; anterior portion of a yellowish-white colour; muscular impressions tolerably well marked.

* A valuable chart of the “Soundings of the West of Ireland” accompanies Hoskyn’s “Report” on the same, published in the “Nautical Magazine,” October, 1862. This chart ought to be consulted by those who are interested in the subject-matter of the present paper.

† See “Ann. and Mag. Nat. Hist.,” vol. xviii., pp. 235, 238. In the paper referred to the *Rhynchonella* is erroneously considered to have belonged to a recent individual. After it was published I determined the *Astartes* named in the text.

‡ Fig. 3 represents the natural width of the specimen.

This species agrees with *Discina lamellosa* (Broderip) in having a nearly circular margin and a sub-central apex, but completely differs therefrom in the character of its external ornamentation; and the lamellæ, which distinguish the latter shell, cannot be identified with the raised lines of *Discina Atlantica*. Mr. J. Gwyn Jeffreys, who has seen the specimen, has suggested that it may be a young example of *Discina tenuis* (G. B. Sowerby)—a suggestion not supported by the representations of this species in the "Thesaurus Conchyliorum."* Although appearing to agree with *Discina Atlantica* in being finely striated concentrically, *Discina tenuis* has a less circular marginal outline, and its apex (stated to be "near the posterior margin") is decidedly sub-marginal.

A rare British fossil shell has been made known, which, on account of its geographical station, requires to be noticed in connexion with the present species—I allude to the specimen of a *Discina* found thirty years ago, by Mr. Searles Wood, in the "Coralline Crag," at Sutton, in Suffolk, and noticed by him, under the name of "*Discina Norvegica*?" in his "Catalogue of Shells from the Crag."† The specimen, like the one I have described, is "only one valve, and that imperfect." It is now in the British Museum, having been presented to the national collection by Mr. S. Wood, along with his highly valuable series of Crag Fossils. Mr. Davidson has given figures and a description of the Sutton specimen, and named it "? *Orbicula lamellosa*."‡ At one time I entertained a suspicion that the shell herein described might turn out to be specifically identical with the Crag specimen; but having lately examined the latter in the British Museum, through the kindness of Dr. Baird, I find that the present species has a more circular form, seemingly finer lines of growth, also a more elevated and less excentrically situated apex.

Mr. James Haughton, Jun., exhibited some shells of *Ianthina fragilis*, "common ocean shell," taken by him last summer in great quantities on the Wexford coast; he also showed some specimens given to him some years ago by the late Professor Kinahan, which, however, were considerably smaller than those now shown as lately taken by himself. He had had them alive for some days, in a bowl of sea water, and thus had had an opportunity to see their curious float. He lost them shortly, however, apparently owing to the water becoming foul, from the dense purple excretion given out by these animals.

Mr. Adair mentioned having once, some twenty years back, taken this shell in immense quantities on the Antrim coast, and was disposed to think its occurrence on British coasts to be periodical.

* Pl. lxxiii., Figs. 4 & 5, *op. cit.*

† Published in the "Ann. and Mag. of Nat. Hist.," vol. vi., p. 155-184.

‡ See "Fossil Brachiopoda of Great Britain," Part I., p. 7, Pl. 1, Figs. 9, 9a, 9b.